

Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of the Claims

1. (Previously Presented) A method for compressing data, comprising the steps of:

analyzing a data block of an input data stream to identify one or more data types of the data block, the input data stream comprising a plurality of disparate data types;

performing content dependent data compression, if a data type of the data block is identified;

performing data compression with a single data compression encoder, if a data type of the data block is not identified.

2-22. (Canceled)

23. (Previously Presented) The method of claim 1, further comprising outputting a compressed data block.

24. (Previously Presented) The method of claim 1, further comprising appending a data compression type descriptor to a compressed data block.

25. (Previously Presented) The method of claim 24, further comprising outputting the compressed data block with the appended data compression type descriptor.

26-29. (Canceled)

30. (Previously Presented) A method for compressing data,

comprising the steps of:

analyzing a data block of an input data stream to identify a data type of the data block, the input data stream comprising a plurality of disparate data types,

if the data type of the data block is identified, then the method further comprising:

performing content dependent data compression to compress the data block;

comparing a content dependent data compression ratio of the compressed data block against a first threshold;

appending a data compression type descriptor to the compressed data block;

outputting the compressed data block and appended data compression type descriptor, if the content data compression ratio is above the first threshold; and

performing data compression on the data block with a single data compression encoder, if the content dependent data compression ratio is not above the first threshold.

31. (Previously Presented) The method of claim 30, wherein if the data type of the data block is not identified, then the method further comprising:

performing data compression with a single default data compression encoder to compress the data block;

comparing a default data compression ratio of the compressed data block against a second threshold;

if the default data compression ratio is below the second threshold, then appending a null data compression type descriptor to the data block and outputting the data block and appended null data compression type descriptor; and

if the default data compression ratio is above the second threshold, then appending a default data compression type descriptor to the compressed data block and outputting the compressed data block and appended default data compression type descriptor.

32. (Previously Presented) The method of claim 1, wherein said performing content dependent data compression further comprises enabling at least one encoder associated to said data type to compress said data block.

33. (Previously Presented) The method of claim 1, wherein said performing content dependent data compression further comprises:

associating a plurality of encoders to said data type;  
determining which one of said plurality of encoders associated to said identified data type is to at least output a compressed data block.

34. (Previously Presented) The method of claim 1, wherein said performing content dependent data compression further comprises:

compressing said data block with a plurality of encoders that are associated to said data type;  
determining which one of said plurality of encoders yields the highest compression ratio.

35. (Previously Presented) The method of claim 1, wherein said performing content dependent data compression further comprises compressing said data block with cascaded encoders that are associated to said data type.

36. (Previously Presented) The method of claim 1, wherein said content dependent compression is lossless.

37. (Previously Presented) The method of claim 1, wherein said content dependent compression is lossy.

38. (Previously Presented) The method of claim 1, wherein said data compression is lossless.

39. (Previously Presented) The method of claim 1, wherein said content dependent compression is lossy and said data compression is lossless.

40. (Previously Presented) The method of claim 1, wherein said content dependent data compression further comprises associating a plurality of encoders to said data type, wherein at least one of said plurality of encoders provides lossy compression and at least another one of said encoders provides lossless compression.

41. (Previously Presented) The method of claim 1, wherein said content dependent data compression is lossy or lossless dependent on said data type.

42. (Previously Presented) The method of claim 1, wherein said content dependent data compression is lossy and the amount of desired resolution of said lossy compression is selected.

43. (Previously Presented) The method of claim 1, wherein said input stream is a compressed input stream.

44. (Previously Presented) The method of claim 1, wherein said input stream is an uncompressed input stream.

45. (Previously Presented) The method of claim 1, further comprising processing said data block as having a fixed size.

46. (Previously Presented) The method of claim 1, further comprising processing said data block as having a variable size.

47. (Previously Presented) The method of claim 1, further comprising counting the size of said data block.

48. (Previously Presented) The method of claim 1, further comprising buffering said input data stream.

49. (Previously Presented) The method of claim 1, further comprising buffering a compressed data block.

50. (Previously Presented) The method of claim 1, further comprising:

    outputting a compressed data block; and  
    providing a compression type descriptor with said compressed data block representative of the type of compression used to provide said compressed data block.

51. (Previously Presented) The method of claim 1, wherein said content dependent data compression further comprises providing a compressed data block from the one of a plurality of encoders, associated to said data type, that has the highest compression ratio for said data block.

52. (Previously Presented) The method of claim 1, wherein said content dependent data compression further comprises providing a compressed data block from the one of a plurality of encoders, associated to said data type, that has the highest compression ratio for said data block, wherein said highest compression ratio is determined by comparing the size of said data block to the size of said compressed data block.

53. (Previously Presented) The method of claim 1, wherein said content dependent data compression further comprises providing a compressed data block from the one of a plurality of encoders, associated to said data type, that has the highest compression ratio for said data block so long as said highest compression ratio exceeds a compression threshold.

54. (Previously Presented) The method of claim 1, wherein said data compression further comprises providing a compressed data block from said single compression encoder so long as the compression ratio of said compressed data block exceeds a compression threshold.

55. (Previously Presented) The method of claim 1, wherein:  
said content dependent data compression further comprises providing a first compressed data block from the one of a plurality of encoders, associated to said data type, that has the highest compression ratio for said data block so long as said highest compression ratio exceeds a first compression threshold if said data type of said data block is identified; and  
said data compression further comprises providing a second compressed data block from said single compression encoder so

long as the compression ratio of said second compressed data block exceeds a second compression threshold if said data type of said data block is not identified.

56. (Previously Presented) The method of claim 1, wherein:  
said content dependent data compression further comprises providing a first compressed data block from the one of a plurality of encoders, associated to said data type, that has the highest compression ratio for said data block so long as said highest compression ratio exceeds a first compression threshold if said data type of said data block is identified; and

    said data compression further comprises providing a second compressed data block from said single compression encoder so long as the compression ratio of said second compressed data block exceeds a second compression threshold if said data type of said data block is not identified, wherein said first and second compression thresholds are different.

57. (Previously Presented) The method of claim 1, wherein:  
said content dependent data compression further comprises providing a first compressed data block from the one of a plurality of encoders, associated to said identified data type, that has the highest compression ratio for said data block so long as said highest compression ratio exceeds a first compression threshold if said data type of said data block is identified; and

    said data compression further comprises providing a second compressed data block from said single compression encoder so long as said the compression ratio of said second compressed data block exceeds said first compression threshold if said data type of said data block is not identified.

58. (Previously Presented) The method of claim 1, wherein said content dependent data compression further comprises providing a compressed data block from the one of a plurality of encoders, associated to said data type, that has the highest compression ratio for said data block so long as said highest compression ratio exceeds a first user-specified compression threshold.

59. (Previously Presented) The method of claim 1, wherein said content dependent data compression further comprises providing a compressed data block from the one of a plurality of encoders, associated to said data type, that has the highest desirability factor for said data block.

60. (Previously Presented) The method of claim 1, wherein said content dependent data compression further comprises providing a compressed data block from the one of a plurality of encoders, associated to said data type, that has the highest user-specified desirability factor for said data block.

61. (Previously Presented) The method of claim 1, wherein said content dependent data compression is performed so long as the time to perform said content dependent data compression is below a time value.

62. (Previously Presented) The method of claim 1, wherein said content dependent data compression is performed so long as the time to perform said content dependent data compression is below a time value, wherein said time value is user-specified.

63. (Previously Presented) The method of claim 1, wherein said data compression is performed so long as the time to perform said data compression is below a time value.

64. (Previously Presented) The method of claim 1, wherein said data compression is performed so long as the time to perform said data compression is below a time value, wherein said time value is user specified.

65. (Previously Presented) The method of claim 1, wherein said content dependent data compression further comprises:

initializing a timer;  
compressing said data block using at least one encoder associated to said data type; and  
outputting said compressed data so long as said timer does not expire with respect to a time value.

66. (Previously Presented) The method of claim 1, further comprising:

providing a compression threshold; and  
outputting a compressed data block that exceeds said compression threshold.

67. (Previously Presented) The method of claim 1, wherein said performing content dependent data compression further comprises:

associating a plurality of encoders to said data type; and  
determining which one of said associated encoders to use to compress said data block.

68. (Previously Presented) The method of claim 1, wherein

said performing content dependent data compression further comprises:

        associating a plurality of encoders to said data type; and  
        compressing said data block using at least two of said associated encoders.

69. (Previously Presented) The method of claim 1, wherein said performing content dependent data compression further comprises:

    associating a plurality of encoders to said data type;  
    compressing said data block using at least two of said associated encoders; and determining which of said at least two of said associated encoders produced the highest compression.

70. (Previously Presented) The method of claim 1, wherein said performing content dependent data compression further comprises compressing said data block using at least two encoders.

71. (Previously Presented) The method of claim 30, wherein said content dependent compression is lossless.

72. (Previously Presented) The method of claim 30, wherein said content dependent compression is lossy.

73. (Previously Presented) The method of claim 30, wherein said data compression is lossless.

74. (Previously Presented) The method of claim 30, wherein said content dependent compression is lossy and said data compression is lossless.

75. (Previously Presented) The method of claim 30, wherein said content dependent data compression is lossy or lossless dependent on said data type.

76. (Previously Presented) The method of claim 30, wherein said content dependent data compression is lossy and the amount of desired resolution of said lossy compression is selected.

77. (Previously Presented) The method of claim 30, wherein said input stream is a compressed input stream.

78. (Previously Presented) The method of claim 30, wherein said input stream is an uncompressed input stream.

79. (Previously Presented) The method of claim 30, further comprising processing said data block as having a fixed size.

80. (Previously Presented) The method of claim 30, further comprising processing said data block as having a variable size.

81. (Previously Presented) The method of claim 30, further comprising counting the size of said data block.

82. (Previously Presented) The method of claim 30, further comprising buffering said input data stream.

83. (Previously Presented) The method of claim 30, further comprising buffering said compressed data block.

84. (Previously Presented) The method of claim 30, wherein said data compression further comprises providing a second data compression type descriptor with a second compressed data block.

85. (Previously Presented) The method of claim 30, wherein said data compression further comprises providing a second threshold for said data compression with said single data compression encoder.

86. (Previously Presented) The method of claim 30, wherein said data compression further comprises:

providing a second threshold for said data compression with said single data compression encoder; and

outputting said data block if the compression ratio obtained from said data compression with said single data compression encoder does not exceed said second threshold.

87. (Previously Presented) The method of claim 30, wherein said data compression further comprises:

providing a second threshold for said data compression with said single data compression encoder; and

outputting said data block with a null data compression type descriptor if the data compression ratio obtained from said data compression with said single data compression encoder does not exceed said second threshold.

88. (Previously Presented) The method of claim 30, wherein said data compression further comprises:

providing a second threshold for said data compression with said single data compression encoder; and

appending a null data compression type descriptor to said data block.

89. (Previously Presented) The method of claim 30, wherein said data compression further comprises determining whether or not to output a null data compression type descriptor.

90. (Previously Presented) The method of claim 30, wherein said content dependent data compression further comprises: associating at least one encoder to said data type; and compressing said data block with at least one of said at least one associated encoders to provide said compressed data block.

91. (Previously Presented) The method of claim 30, wherein said content dependent data compression further comprises: associating at two encoders to said data type; and compressing said data block with at least two of said at least two associated encoders to provide said compressed data block.

92. (Previously Presented) The method of claim 30, wherein said content dependent data compression further comprises: associating at least two encoders to said data type; and providing said compressed data block from the one of said at least two associated encoders that provides the highest compression ratio.

93. (Previously Presented) The method of claim 30, wherein said content dependent data compression further comprises

enabling at least one encoder associated to said data type to compress said data block.

94. (New) A method comprising:

receiving a data block in an uncompressed form, said data block being included in a data stream;

analyzing said data block to determine a type of said data block; and

compressing said data block to provide a compressed data block, wherein if one or more encoders are associated to said type, compressing said data block with at least one of said one or more encoders, else compressing said data block with a data compression encoder.

95. (New) The method of claim 94, further comprising outputting said data block in said uncompressed form if said compressed data block is indicative of data expansion.

96. (New) The method of claim 94, further comprising outputting said data block in said uncompressed form with a descriptor representative of no compression if said compressed data block is indicative of data expansion.

97. (New) The method of claim 94, further comprising outputting said compressed data block.

98. (New) The method of claim 94, further comprising outputting said compressed data block with a descriptor representative of the compression technique used to compress said data block.

99. (New) The method of claim 94, wherein said compressed data block is the result of a lossy compression technique.

100. (New) The method of claim 94, wherein said compressed data block is the result of a lossy compression technique and the amount of resolution of said lossy compression technique is selectable.

101. (New) The method of claim 94, wherein at least one of said one or more encoders is lossy.

102. (New) The method of claim 94, wherein said at least one of said one or more encoders provides lossy compression and compression parameters representative of the amount of resolution of said lossy compression are selectable.

103. (New) The method of claim 94, further comprising selecting the resolution of said at least one of said one or more encoders, wherein said at least one of said one or more encoders is lossy.

104. (New) The method of claim 94, wherein said data compression encoder is lossless.

105. (New) The method of claim 94, wherein said data compression encoder is lossless and said at least one of said one or more encoders is lossy.

106. (New) The method of claim 94, wherein said data compression encoder is lossless and said at least one of said one or more encoders is lossless.

107. (New) The method of claim 94, wherein said at least one of said one or more encoders comprises a plurality of encoders provided in parallel.

108. (New) The method of claim 94, wherein said at least one of said one or more encoders comprises a plurality of encoders provided sequentially.

109. (New) The method of claim 94, further comprising analyzing the size of said compressed data block to determine whether to output said data block in said uncompressed form or to output said compressed data block.

110. (New) The method of claim 94, further comprising performing an analysis using the size of said compressed data block and a compression threshold to determine whether to output said data block in said uncompressed form or to output said compressed data block.

111. (New) A method comprising:  
receiving a data block, wherein said data block is included in a data stream;  
determining whether to output said data block in received form or in a compressed form; and  
outputting said data block in received form or said compressed form based on said determination, wherein outputting said data block in said compressed form comprises determining whether to compress said data block with content dependent data compression based on the type of said data block or to compress said data block with a single data compression encoder.

112. (New) The method of claim 111, further comprising:  
compressing said data block to provide said data block in  
said compressed form in accordance with said determination  
whether to compress said data block with content dependent data  
compression or said single data compression encoder; and  
outputting said data block in received form if said  
compressing causes the size of said data block in said compressed  
form to expand with respect to said data block in received form.

113. (New) The method of claim 111, further comprising:  
compressing said data block to provide said data block in  
said compressed form in accordance with said determination  
whether to compress said data block with content dependent data  
compression or said single data compression encoder; and  
outputting said data block in received form with a  
descriptor representative of no compression if said compressing  
causes the size said data block in said compressed form to expand  
with respect to said data block in received form.

114. (New) The method of claim 111, further comprising:  
compressing said data block to provide said data block in  
said compressed form in accordance with said determination  
whether to compress said data block with content dependent data  
compression or said single data compression encoder; and  
outputting said data block in said compressed form.

115. (New) The method of claim 111, further comprising:  
compressing said data block to provide said data block in  
said compressed form in accordance with said determination  
whether to compress said data block with content dependent data

compression or said single data compression encoder; and  
outputting said data block in said compressed form with a  
descriptor representative of the technique used to compress said  
data block to provide said data block in said compressed form.

116. (New) The method of claim 111, further comprising:  
compressing said data block to provide said data block in  
said compressed form in accordance with said determination  
whether to compress said data block with content dependent data  
compression or said single data compression encoder, wherein said  
data block in said compressed form is provided by a lossy  
compression technique.

117. (New) The method of claim 111, further comprising:  
compressing said data block to provide said data block in  
said compressed form in accordance with said determination  
whether to compress said data block with content dependent data  
compression or single data compression encoder, wherein said data  
block in said compressed form is provided by a lossy compression  
technique and the amount of resolution of said lossy compression  
technique is selectable.

118. (New) The method of claim 111, further comprising:  
compressing said data block to provide said data block in  
said compressed form in accordance with said determination  
whether to compress said data block with content dependent data  
compression or said single data compression encoder, wherein said  
data block in said compressed form is provided by a lossy  
compression technique and compression parameters representative  
of the amount of resolution of said lossy compression technique  
are selected.

119. (New) The method of claim 111, further comprising:  
determining to compress said data block with said content  
dependent data compression;

compressing said data block to provide said data block in  
said compressed form block with said content dependent data  
compression;

selecting the resolution of at least one encoder associated  
to said content dependent data compression.

120. (New) The method of claim 111, further comprising:  
compressing said data block to provide said data block in  
said compressed form in accordance with said determination  
whether to compress said data block with content dependent data  
compression or said single data compression encoder; and

providing at least one lossy encoder for said content  
dependent data compression with selectable resolution.

121. (New) The method of claim 111, wherein said single data  
compression encoder is lossless.

122. (New) The method of claim 111, wherein said single data  
compression encoder is lossless and at least one encoder  
associated with said content dependent data compression is lossy.

123. (New) The method of claim 111, wherein said single data  
compression encoder is lossless and at least one encoder  
associated with said content dependent data compression is  
lossless.

124. (New) The method of claim 111, wherein said single data compression encoder is lossless, at least one encoder associated with said content dependent data compression is lossless, and at least another one encoder associated with said content dependent data compression is lossy.